Series III
Speeches and Writings, 1942-1967

Box 17, Folder 2

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CAPTAIN R. W BATES: I hear that Mr. Brodie spoke before you. If you have read his book why you can commend it to others, and if you haven't read it I can commend it to you because it is a rather interesting simple book on naval strategy and tactics. Also, there is another writer coming out now--Rosinski. HERBERT Rosinski. I mention him here, AS a German who is very deep. Brodie commends him quite fully in his preface, but I have heard Rosinski and he is really coming along. He has a fine head.

Gentlemen, I can not begin to tell you how pleased I was to receive the information I was to have the privilege of adress'ng you today on the subject of naval strategy. It is a highly interesting subject and one that can not be handled in a matter of hours. I have decided therefore, to dwell upon it in a somewhat abstract manner in order to insure that you have obtained therefrom a suitable background for further investigation. It is my plan to first touch upon the theory of war, as an understanding of this is an essential to the study of strategy, then to discuss certain aspects of the command of the seas. Finally, to discuss lines of communications.

War today is not conducted solely by the professional soldier or sailor. It is now a function of the ~~empire~~ ENTIRE people. It is therefore incumbent on the leaders of the people, and especially on the political and industrial leaders to contribute their full part to the national effort. How can the leaders of the people be sure they are doing so unless they understand war thoroughly in its broader aspects, and as all of you are leaders and successful men, it is evident to me that you have clearly grasped this point. The fact that you have given up your time to the study of war shows me that our prominent citizens are not blind to its importance and to the importance of the citizenry in the pattern of modern war. That the Germans have thoroughly understood this is well attested by the following article from the German Navy: "That war is no longer the sole concern of regular armies and fleets, mercenaries and professional soldiers whose battle in the bloody arena the

others may idly watch but it is now a matter which draws in almost equal degree the life of every man, woman and child of the nation in the conflict. Today it is not the kings and marshalls, generals and admirals who govern the people but the citizens themselves. However, if the study of war is to be a real service to the soldier in avoiding the errors which his predecessors have made in the conduct of war, then the statesmen from civilian ranks who are called upon to govern the nation in time of war must also be thoroughly familiar with this subject.' Thus, you see that you gentlemen are now undertaking what the German foe has been studying and considering for many years.

As stated a moment ago, it is my plan to discuss at the start, war in general, rather than to jump feet first into a discussion of naval strategy. Naval warfare can not be outlined and considered as a separate entity. History gives us practically no example of warfare that is solely naval, therefore, naval warfare must be considered as a sub-division of war in general and in its relation to the other sub-divisions. So far as we know, it goes back to the dawn of recorded history but up to the beginning of the 19th century it has been studied more from a historical than from a scientific veiwpoint.

The most frequently military authors quoted such as are Jomini, Napoleon and Clausewitz commenced writing in the early part of that century. Clausewitz enunciated the principal that war is a continuation of policy by other means. This theory is generally accepted today. The most frequently quoted naval writers commenced writing late in and number with the 19th century among others, our own Mahan, Britain's Corbett, France's Castex and Germany's Groos. War comes as a conflict of national policies. Statesmen who frame national policy conduct the affairs of the nations by diplomatic means as long as possible. When conflict between national policies becomes too great and diplomatic pressure fails, other means must be employed, and that means is WAR!

So we must not forget that the political aim is the objective. War is only the means. The conflict of policies therefore determines the character of war as well as the cause. Those who are responsible for conducting wars to successful conclusion, that is the military and naval leaders, must know and understand the political objective. They must know whether the objective of the war is considered important enough to cause nations to bend every effort and strain every resource to insure ultimate victory or whether only a portion of the strength and national resource is to be risked. For the same reason it is essential for the statesmen who formulate and direct the policies which may cause war to know the possibilities and limitations of the armed forces which are to be called upon to implement their policies. I want to get that clearly understood gentlemen. War is only the means to achieve the end of national policy--the national aim. Victory at sea only does that--contributes toward it. It is only the means to an end. In other words, the service, Army and Navy, are only your right arm. You, the citizens, formulate the policies which in the end we must carry out. What I am saying here is that you who have formed the political objective must also know something about the Army and the Navy to insure that they are capable of carrying out that political objective--of achieving it. I heard Admiral FULLAM, some years ago, during the last war, before the San Francisco Commonwealth Club, say, "It is you gentlemen who start wars, not we in the service. We are only the means to the end." That is why I said, when I started out here, that I am glad to see you here. It means you thoroughly understand that very, very important point. The causes of war have been many. In ancient days of rule of absolute monarchy, the national policies were the ideas of the monarchs, therefore, simple matters sometimes caused wars. Wars were caused by family quarrels, by lust for personal and national power, by conflict of ideas such as religious or political and by wars, desire to conquer new territory or extension of trade as was common when new portions of the earth's surface were being discovered and exploited. Whatever the cause, it can always be found to involve material gain for some person, some class, or

some nation.

Those countries possessed of an abundance of national resources are potential sources of international discourd because strong countries may desire to obtain political control over them. Such political control may be direct, as one obtained by annexation, or indirect, as one gained through a dominating influence of the native government. Witness the events of Europe and Asia within the past few years.

Wars have been classified by different writers in different ways. One of the classifications that may come to mind and one that is used by some authors is that of the offensive and defensive war. Generally speaking, a country that wishes to change its status quo is waging offensive war. The country endeavoring to maintain it is waging defensive war. That is purely a classification of objective and not a method. Even this is not a specific classification of objectives because frequently objectives change during the progress of a war. The classification of war as positive and negative meets similar objections. These terms might be used to differentiate political objectives but there is always the danger that the means might be extended to the methods used. For instance, in the Germany-Norwegian War, Germany's political aim was to prevent the Allies from taking possession of Norway, which was a negative method. However, the method adopted to attain this end was to take possession of Norway herself and this certainly was a positive method.

A war may be said to be of a limited nature if one side is able to accomplish its objectives without the complete overthrow of its opponents. An example of this in recent years was the Russian-Finnish War when Russia attacked Finland to gain control of certain Finnish territory to the Northwest of Leningrad in order to give added protection to that city.

Geographical separation of the centers of power of two contending nations plays a very important role in limiting most wars. This may be caused by the fact that there is no available overland access between them as

when they are separated by sea or by intervening neutrals or it may be caused by the intervention of land areas to such an extend and character as to make it difficult or impossible by ardent belligerents to exerts its full strength against the heart of the country. However, this geographical separation is becoming less and less a barrier as the power and radius of airplanes become greater and greater. Isn't it true that the feeling of security which our people have enjoyed for many years from Europe and Asia because of our natural ocean barriers is fast fading as the possibilities of the airplane as a weapon of total war against us becomes increasingly apparent?

Most future wars between major powers may be expected to be unlimited or total in character. This is because the economic differences between nations for survival may depend upon control of sources of supply, because of ideological differences in conceptions of government as indicated in the differences between Communism and Fascism, because of the present day character of weapons such as airplanes which can strike swiftly at any state within reach and because of industrialization which permits production of armaments in a great flood. In the latter case the only certain way to prevent such production is to destroy the industry.

This can best be accomplished from a distance with any degree of effectiveness by the use of air power which immediately means bombing of civilian population, and each side will seek to cripple or destroy the other side's resources for war at their base and to inflict on its own population suffering more intense than the special object is worth. This is the phase which is now under way against Italy and Germany by the great raids of the RAF and AAF. In this conception geography seems to play an important part. Unlimited war will more likely develop between belligerents close together than those that are well separated although even well separated wars may develop as soon as advanced bases for the advance of land base aircraft can be obtained which will permit the operation of such aircraft in quantity against the vital home front of the enemy. This is a phase of the war which

apparently has developed in the Pacific today. The modern development of air and mechanized warfare has greatly increased the facilities for bringing pressure to bear on an enemy's entire population and breaking his will to resist. War, on the continent of Europe, always tends to bring into question the balance of power and so, to pass from limited to unlimited, whatever the nature of the original objective may have been. The concern manifested in the recent Spanish Civil War was caused by the feeling that intervention by other countries might disturb the balance of power and thus bring on a general war. In unlimited war it is considered that the objectives can best be obtained by the complete overthrow of the armed forces of the enemy which will bring about the collapse of the organized resistance of the defeated powers. The World War now raging may be cited as an example of unlimited or total war. Both the Axis and the United Nations feel that the complete overthrow of the adversary is the goal sought and every possible means of accomplishing this by unrestricted submarine warfare and bombing of civilian objectives is being used. The distinction between limited and unlimited wars may sometimes be exemplified in the same war, providing there are more than two belligerents. In the first World War we find the European countries and the United States fighting an unlimited war. The Japanese, on the other hand, took a limited objective--the conquest of German possessions in the Pacific. Having accomplished this conquest with a comparatively small expenditure of effort, she practically ceased any further effort or participation in the war. Corbett calls a war in which an ally does not participate with all its strength, especially as it applied to an insolar power like Great Britain, a war of limited intervention--interference in an unlimited war. Italy's part in the present World War, at least in the first phase, might be placed in the category of a war of intervention. Obviously, the degree of participation will be dependent upon the nature of the objective which the intervening country has chosen and upon what it may expect to happen to it in the case its enemy wins the war. In both respects geography plays an all important part. Italy being vulnerable to reprisal of a possibly victorious France and England had to exercise caution that she didn't come in until she felt sure which way victory was going.

Then she came in primarily against France, to gain part of Southern France and also part of French Africa. HER For unlimited participation today is the result of her failure to estimate properly the power of the United Nations. Our participation in World War I has been classed as unlimited. This was in spite of the fact that our geographical position made us almost safe at that time from the victorious Germans and in addition, we were fighting for no direct material gain. It seems probable that President Wilson's original idea may have been for a limited interference in an unlimited war which would have been all that our material national self interest could have called for. At any rate, the actual unlimited participation shows that moral as well as material gain plays a great part in war. In World War II our participation is obviously unlimited. This is because the defeat of the Axis is vital to our future well being and because American participation in practically all of the possible fields, including the German home front, is vital to victory. War, as a general thing, requires the use of land, sea and air forces. Skillfully conceived, strategy will appreciate the relative importance that must be given to each in order to achieve the political objectives. Of course, we keep coming back to this political objective. The means to the end. It may be that attainment of naval supremacy for war will be that the Army must first of all assist the Navy to attain this, and as occurred at Port Arthur in the Russian-Japanese War, where the Japanese were forced to take Port Arthur in order that the Russian Fleet might be forced to go to sea and be destroyed before reinforcements could be sent. On the other hand, it might be that the task of the Navy will be to assist the Army before it can devote itself to seeking out and defeating the hostile naval forces as was done in both World Wars in regard to escorting troops across the British channel. Which ever it is, the closest cooperation must exist, not only between the Army and Navy forces, but I think with due appreciation by both of them of the part to be played by their respective branches in the air. Captain GROOS Bruce says that at the start of World War I, a plan for such cooperation was entirely lacking on the German side and on the British side existed only as it resulted from the

necessity of landing the British Expeditionary Forces in France. The object of naval strategy must always be directly or indirectly to secure command of the sea or to prevent the enemy from securing it. However, it must be remembered that securing command of the sea is not the end--it is only the means to the end of furthering national policy. This expression,"command of the sea" or its equivalent, is constantly found in the study of naval strategy. It may be well to consider exactly what we mean by it as it is the basis of all naval strategy, at least so far as the United States, Great Britain and Japan are concerned. There are many phrases and expressions that seem to mean different things to different people. Let us first discuss the sea. The sea has little wealth. This current command or control has no tangible value of its own, neither can it be held or permanently administered for the benefit of any nation. It can not contribute to the support of the armed forces. On the contrary, it acts as a barrier to them. It restricts their movements. It acts as a protection to national frontiers which border on them. The sea is a broad road without boundaries and like the air is a medium of supporting the traffic of all nations. Thus, paradoxically, while being a barrier, an obstacle to communication, it is also a highway, but unlike other highways, belongs to no one. On land, a highway is owned by some sovereign. It can be guarded, held, captured. But the sea is owned by no sovereign. It cannot be held or captured like a piece of land. No one can possess any part of it permanently. This comment about the sea is also applicable to the air. You hear these discussions now started by Mrs. Luce. I am taking no sides in the matter here gentlemen, but I am bringing out the point that there is such a thing ~~that is~~ as uncommanded air and I will discuss that later. Over ~~this~~ the sea highway run the life lines of empire, what naval strategists consider lines of communication. Whether a nation desires to use the sea to insure its means of supply, to deny it to the enemy, to protect itself against invasion or to carry the war to the territory of the foe, it is the first responsibility of its Navy to protect its line of communications.

A nation controling its line of communications has the resources of the world at its command. How intimate this is today. Here we have the United Nations able to draw upon most of the world for supplies and on the other hand we have the Axis practically with no control excepting in the Far East, but deprived of a major part of vital and important material.

Now let us discuss command of the sea. To do this it seems wise to give a definition of what command of the seas means. In the first place it must be understood that it is seldom, if ever, that a complete command of the sea is obtained or even coveted by one side in a war. Usually, where there is naval strength on both sides, the weaker navy is strong enough to control certain areas. Geography is apt to play a predominant part in this. For example, Germany never lost control of the Baltic in World War I. Japan made no serious effort, except perhaps in the Midway expedition to extend her command East of Hawaii and at present seems to be content to maintain gain control to the westward of Kiska-~~Bambara South Island~~ MASORO - Solomon Island line. The naval strength necessary to gain control of all the sea areas is not available. When both contestants in the war possess naval forces of reasonable strength, the naval situation usually resolves itself at the outset into one in which each side has control of a certain area. Outside of these two areas there may be areas which neither control. As the war proceeds, each side will wish to extend its control beyond the area initially held by it. Each will try to increase its own sea communications and decrease those of the enemy. During war, a maritime nation is more interested in commanding certain areas than others. The areas which will always be of the greatest importance are those which lie along its own coast. If it can keep its coastal shipping lanes open, an enemy will not be able to cross its sea frontiers and directly attack its territory. The sea lanes for instance, to Norway, were controlled for the passage of Germany troops which conquered Norway. A nation is interested in that part of the sea which lies between itself and its allies or between itself and those neutrals upon which it depends for essential war and food

supplies. A nation will desire to extend command to those sea areas vital to the enemy for the transport of his military goods in the defense of his territory. Finally, a nation may find it necessary to patrol sea lanes and coast lines of ordinary commercial trade to deny them to the enemy and to insure that its own usual trade will continue. The degree of interest in the patrol of particular parts of the sea depends upon the influence that their transit will have in promoting the attainment of the objectives of the war as a whole. Thus we can arrive at our definition, a sea area may be considered under the command of a belligerent when the belligerent is able to carry on freely the operations of its naval forces and the movements of its sea borne traffic and when its enemy is unable to carry out similar undertakings in that area except at a considerable risk of serious consequences. We repeat, a sea area may be considered under the command of a belligerent when the belligerent is able to carry on freely the operations of its naval forces and the movements of its sea borne traffic and when its enemy is unable to carry out similar undertakings in that area except at a considerable risk of serious consequences. This command may be due to sea power alone but in the vicinity of our own coast it is generally due to air power either alone or with the support of naval units. The command of the sea area by one belligerent does not assure the complete safety of its naval operations. It merely provides a large measure of safety for them and in addition it restricts the enemy to sporadic operations of limited duration. This was all too vividly demonstrated by the attack on our fleet at Pearl Harbor on December 7--a sporadic attack. Strategic disposition of superior forces does not of itself insure command of the sea area. If one of two hostile fleets remains in force, its existence may constitute a threat to the other but under this condition it will never actually enter into contest for command. A nation's naval force can only discharge its full obligations through active and persistent operations at sea. It will be valuable in the contest for sea supremacy to the extent it is able to project accurate and continuous influence over sea areas whose command will be useful for bringing military or economic pressure on the

enemy or will prevent similar pressure from being brought to bear on its own country. In order to control an area it is not always necessary that command be exerted all over. I keep hammering that. If we are concerned with some particular trade route, control of the departure and the arrival area is often more important than control of the areas between them. Narrow waters through which shipping must pass will be of high importance. If one belligerent seeks control of a particular area of the other and can deny it the officially used routes to that area then hope of the effective command of that area is lost. While an effective command of an area may require considerable disposition of naval strength(you may have to send your ships all around in your ~~enemy~~), A belligerent to be successful in maintaining this command must also be able to concentrate enough strength to drive out enemy forces. It is by the disposition of the forces in positions where they can effect a superior concentration that is decisive in maintaining sea command. Of concentration on ~~land~~ L ROUTES ~~roles~~ the essential underlying idea is that of mutual support. That is, the entire force, however distributed at the moment is acting in such device that each part of it is relieved of some of its burden. Then it also does the same for them while the disposition of the alloted strengths facilitates also timely concentration. A very considerable operation in space may be contributed with such usual support. Thus to make sure of the protection of a particular area a deployed force should always be able to concentrate sufficient strength early enough to prevent the infliction of serious damage by the enemy. Essential units can be deployed to such distances and such directions as will permit a superior concentration of strength prior to the arrival of the hostile force. When so deployed this force is said to occupy a central position and to operate on ~~superior~~ interior lines with respect to the enemy. The strength, position and geographical character of an area with reference both to home and enemy naval and air bases may determine the ability to command that area. Naval and air bases are limited in endurance both as to time and distance. After a period of time at sea, several months, naval units must return to base for

replenishments and unless replacements are available their absence will open the way to enemy operations. Therefore, the distance that naval and air bases are from the area in which operations are undertaken, the location of these bases relative to that area, to each other and to enemy bases, the availability of supplies, the length and character of the lines of communications, all have important relations to the probable success that a force will attain in projecting its influence into an area. Air bases are vitally necessary to the command of sea areas. I should amplify that by saying air in strength. Air must be in strength. Sporadic air is almost valueless. It must be in strength and the attacks must be continuous. That means that weather conditions must be satisfactory. In this connection when we consider the strength of the enemy forces one thing to be considered is the influence of the character of the theater of war. Aircraft is no of little use in fog at present. That is an example of what I mean when I say that an aircraft fleet, if it had to operate in areas that were entirely fog, would be completely destroyed by surface fleet if it remained in the area. ~~That is the line I am trying to indicate here.~~ Airplanes operate from air bases suitably located and under suitable conditions and thus can secure an almost absolute control within the range of their fighter aircraft when the aircrafts are in strength. In this connection note the great efforts which the British made in the past few months to hold Malta and thus to dispute the command which the Axis might otherwise acquire in the sea area. Also, note the value of Cyprus and Ceylon to the British, of the mandated islands and New Britain to the Japanese and of Guadalcanal to ourselves. Note how the Japanese extended their control of the sea in their conquest in Malay and the Dutch East Indies under an umbrella of air power. Captain Brown showed you a slide where land and sea power, that is, land base planes and sea base/carrier planes were both being used. Coordinated attacks. Coordinated effort. The Japs did their (COORDINATED) deviltment very ably indeed in their conquest of the Indies. ~~Very well done indeed.~~ As regards naval bases, Mahan has given three requirements

of naval bases as position, strength, resources. These requirements apply to air bases as well. Position can not be created by man but the value of position may be modified by changes in weapons and in political conditions. The growth of fleets, both in numbers and sizes of units, has rendered of little value ports that were once of great strategic importance. Port Mahon in the Mediterranean, Santa Lucia in the West Indies are examples of this. The submarine has made unprotected anchorages of doubtful value. The increasing damage of aircraft has made insecure the bases within flying range of potential enemies possessed of air power. The decrease in the value of Malta to Great Britain has been caused by the proximity of enemy air power, both Italian and German, which is based primarily in Sicily, less than one hundred miles away. The fall of Crete can be directly attributed to the capture, by Germans, of strong air bases, in Greece. The occupation by the Germans of strong air bases in France has seriously affected the use of British naval bases in the south of England. Air bases in a hostile Spain might make Gibralter untenable. Air bases in Australia and Gudaleanal may make the Japanese base at Rabaul untenable. Strength in a naval base is something that is largely inherent in its topographic and hydrographic situation, but it must be augmented by means to improve and strengthen its natural characteristics; and resources must usually be brought to the naval base. This makes the proximity of the resources that are required and line of communications over which they may come a matter of prime importance in naval warfare. A little consideration of the comparative difficulty in keeping a fleet base in the Caribbean on the one hand and Australia on the other, will make this point clear. A base in the Caribbean is close to home resources and its line of communications is well covered. A base in the Pacific, for example, is nearly seven thousand miles from our west coast and its line of communications across the Pacific is flanked by Japanese its mandated islands. If supplied by way of Cape Horn from the East coast the line of communicated would be better protected so far as the Japanese are concerned but the distance would be increased by thirteen thousand miles.

Not all nations have espoused this strategy of command of the sea. Germany, for example, seems to have decided after 1918 that its hope of gaining command of the sea was forlorn and therefore she developed a new strategy which in the words of one of its exponents who rejected command of the sea as outdated, was in part, "The whole strategy must be directed upon the objective of the immobilisation or better still, destroying the merchant shipping of the enemy's fleet with the utmost consideration for one's own forces. Operations are no longer going to be directed on the enemy's forces but against his economic resources. Attack upon the enemy's trade and protection for our own trade, these are to be the decisive tasks to which everything else is going to be subordinated. The result will inevitably be a wide dispersion of naval forces." (~~This is where he is all off.~~) Because of this wide dispersion of naval ships, naval warfare is going to take place on all the seven seas simultaneously and most violently at those points where sea trade is most strongly concentrated." How has this new strategy worked out today? Well, insofar as Germany is concerned, she has command of one sea, the Baltic. Her merchant shipping is practically non-existent on the seas of the world. There is no naval warfare over the seven seas but only in certain areas she commands and where she has been unable to move forces or supplies in and out of her harbor. The German strategist forgets, and here I quote the German Wozinski I referred to, "They forget that the essential issue of that warfare, struggle for command of the seas, has a measure of offense and defense alike, the elimination of the enemy's main force from the seas by battle or blockade and this is the only sure measure against invasion just as it constituted the pivot for the whole complicated system of trade defense and the basis for the diversion of the enemy's forces by combined operations of large scale maritime war." This cardinal function of the command of the sea and naval defense (~~that is where they missed~~) was completely overlooked by the new school of German naval strategy which erroneously

identifying the quest for the command with a military offensive against the enemy's forces, believed that 'warfare in the future could be conducted without such military strategy. It would be mutual trade warfare in the form of attack of defensive convoys.' ~~It is precisely that, (that's the end of the quote).~~ It is precisely the failure of the Germans to recognize the defense quality of command of the seas which is defeating them today. The United Nations' forces are moving in on Germany and it is Germany's lack of command of the sea which will in the end cause collapse. Were it not for command of the sea there could be no invasion of North Africa or of Europe or of Guadalcanal. That portion of the German strategy which embraces war on line of communications is however, in full swing. Let us discuss this war on lines of communications. As our old friend Corbett says, 'A plan for war which has destruction of trade as its primary objective, implys employs in the party using it an inferiority at sea. Had he superiority, his objective would be to convert that superiority to a working command by battle or blockade.' That Germany would probably endeavor to do likewise had she the forces ample to extend seems evident but unfortunately for her, her fleet is too inferior to obtain command of those sea areas vital to herself. Therefore she has developed her new strategy which in reality is only partially sound as indicated previously. Most of her naval activities are now centered on commerce destruction by submarines and air with occasional attacks by surface forces. Corbitt further points out that the basic idea of the attack or defense of trade may be summed up by the old adage 'Where the carcass is there will be the eagles gathered together'. In other words, the points of departure and destination, ~~total~~ focal points in defiles, where owing to the formation of the land trade has to converge, are the most probable points of attack. Have you noticed how often geography is dragged into this? As a consequence, attack on commerce may take one of two forms. It may be terminal or it may be pelagic. That is, by pelagic--in the open sea. Under present conditions, shore based aircraft virtually precludes German attack by surface forces. Where a belligerent can maintain air bases within range of the enemy

ports, aircraft can and are being used on an attack on commerce in and near the trade terminal. Where air attack is difficult or impossible, submarines are now used to harass and destroy trade in the vicinity of the enemy's coast. Remember we had submarines recently off Yokahama. We are all only too familiar with the situation that has existed off our own Atlantic coast. As we know until very recent months shipping the bottleneck of much of our war effort has been suffering heavily from submarine attacks, along that coast. The decrease in losses off the Atlantic Coast recently may be contributed to two factors (1) diversing of submarines to the North African area and mid-ocean areas which is pelagic and (2) measures made to increase the effectiveness of anti-submarine measures. I can add a third--weather. In the North Atlantic, the weather at this time is very bad. You probably heard Admiral Andrews address yesterday, or read it. He's in charge of the Eastern Sea Frontier. He stressed the submarine menace in the attack on our lines of communication. Now when the weather picks up the submarine has better advantage. It can operate better. In the open seas all forms of attack are possible. Surface, sub-surface, air and air is either long range shore based aircraft or carrier planes. Commerce destruction can seldom, if ever, be the decisive factor in war. That it can exert a powerful influence I am sure no one bare doubts. Warfare on trade may have either or both of two objectives. The destruction of the enemy's seaboard (seaborne) commerce or diversion of enemy forces from the main theater. Naval operations of our enemies in the Atlantic are apparently directed primarily at the destruction of commerce with diversion of allied naval forces as secondary objectives. The more the Germans can force us to maintain forces in the Atlantic, the more must our forces be weakened in the Pacific. Attack against trade bears a diversive effect which can sometimes have a very marked influence on war. Whenever diversion of the of the enemy's naval force is the primary objective the warfare on trade to be effective must be directed against trade that is vital to the enemy. It must be continued so that it will inflict serious loss vital to the enemy. Sporadic attacks for a short period are insufficient. This also holds true

when the primary objective is depriving the enemy of his sea going commerce. This form of attack is effective only against the nations that must rely to a large degree upon imports of essential material and supplies. It is much more effective against Britain than it would be against us. Depite the vacillating attitude of the German high command as to unrestricted use of submarines in the first World War, Britain reached a very low ebb in her war effort as a result of the destruction of her essential imports. The contention of the German naval staff that continuous unrestricted warfare on Britain's trade would have eliminated her from the war may have been correct. While sporadic attacks on the enemy's commerce do not exert the determining influence, they are not without value. They invariably cause marine insurance rates to go up and discourage neutrals from engaging in trade. They have frequently caused shipping to be held up until adequate protection has been furnished the locality. However, determined and continuous attacks on commerce can have a decided influence on the course of the war and it was on this strategical concept that the Germans are evidently now focusing their attention at sea. Continued success in this type of warfare might result in the collapse of the nation through the lack of materials of war as well as the foodstuffs. Such might have been Britain's fate had it not been for the entry of the United States into the field, first, of production and then of war. As a matter of interest, General Wavell, now Field Marshall Wavell, wrote a book some years ago, of some speeches which he delivered, I think it was at Cambridge, on leadership, generalship, and he said that the best definition he could find after looking through all the masters, was given by Socrates, and the first thing mentioned by Socrates was that 'a general must understand supply.' Logistics. That is why I am so interested in your presence here. In addition to the political objective you represent to me logistics. You can't fight a war if you haven't got the materials to fight it with. You gentlemen provide them. Logistics. The strategical result which I believe the

Germans hope to achieve from this war are the lines of communications of the United Nations. Not in any sense command of the sea but rather a weakening of ~~all of the~~ command of the sea. Should she succeed in this to any vital degree she hopes to be able to limit our offensive power within her theater of war so as to force us to accept some form of negotiated peace. It is interesting to note that we, in the West Pacific, are using the same strategy as the Germans but for a different reason. Our attack on Japanese lines of communications is to so weaken the Japanese as to force a gradual weakening of her powers of resistance and thereby assist in her eventual collapse. As a result of what is going on at sea there are daily reports of losses of both naval and merchant vessels by the United Nations. This is to be expected. Wars can not be fought without losses. There is no possible method or combination of methods whereby trade or even naval vessels can be given absolute protection. To attempt to do this is to fall into the strategical error of trying to be superior everywhere and thus to forfeit success by failure to take what Admiral King refers to as "calculated risk."

Gentlemen, I regret that my time is short and I can not discuss the subject any longer. It is one of the most fascinating studies in the world, as I imagine you have already discovered, and is of such vital importance that most other matters pale in the comparison.

However, before finally signing off, let us summarize what we have discussed. First, that victory at sea is not the end. It is only the means to the end of achieving the national, the political objective. Second, that wars in the past have generally fallen into two categories, limited and unlimited, or total war. The present war is unlimited and it is probable that most future wars will be unlimited in character. Third, that the great concept of naval strategy upon which the success of the United Nations hinges is command of the sea. Fourth, that a sea area may be considered under the commanding of a belligerent when the belligerent is

able to carry on freely the operations of its naval forces and the movements of its sea boarn traffic and when its enemy is unable to carry out similar undertakings in that area except at the considerable risk of serious consequences and fifth, and finally, that for an inferior force one of the most effective means of weakening the enemy's command of the sea is through determined and continuous attacks on its lines of communications. Success in this method of attack can well change the vital nature of the peace.

I am especially pleased to address you this morning on the decision making process for a number of reasons among which are

A) The fact that you have been selected for this assignment by your respective Nations and therefore, are "outstanding" and have large futures before you.

B) The fact that in your studies here and elsewhere you have probably noted that in war some commanders measure up to the requirements of their duties while others do not and yet those that do not so measure up often become more famous than those who do. In my discussions today, I will point out several commanders who did not measure up fully, and yet received national and world acclaim; notably Vice Admiral Mikawa at Savo Island and Lord Howe at the glorious first of June; and one, at least, who did, but who has not yet received the acclaim to which he was entitled notably Admiral Raymond Ames Spruance.

In this connection I ~~work~~ WISH at this point to set some ~~runners~~ RUMORS at rest. I have heard from several sources, that some of you have the idea that my talk today is on the process employed in arriving at a decision. I should be happy to do this as I have lectured on this many times during the early days of the war. However this is not what I am going to discuss today excepting in a limited field, as time is short. What I am primarily interested in, is pointing out some of the successes

and failures in decision making largely in World War II and to endeavor thereby to drive home to you the vital importance of logical thinking.

Adm Bates W.D.

SOME THOUGHTS ON ASW

In the classic sense, Naval Strategy includes the development of plans for and dispositions of Naval forces prior to the outbreak of armed conflict. Armed conflict or war was referred to by Clausewitz as the extenTION of political relations through other means. The objective of war is in fine the destruction of the enemy's will to resist. Often in warfare, the objective is secured following destruction of a major portion of the enemy's military forces but this is not a hard and fast prerequisite for the attainment of the objective.

U. S. naval strategy in implementation of the nation's political objectives seeks to ensure integrity of sea lines of communication and seeks to maintain sufficient forces in being to enable the navy to decisively control vital sea areas. Naval strategists recognize that control of the sea is virtually limited to the two foregoing concepts.

Military strategy contains both offensive and defensive elements. Addressing ourselves principally to one aspect of naval warfare, namely antisubmarine warfare we recognize the latter to be largely defensive in character. This observation does not gainsay the proponents of the strategic air offensive who by inclusion of submarine bases in their target programming purport to contribute most effectively to the antisubmarine effort at the outbreak of hostilities. Assuming, however, that preparatory to war an aggressor's submarine forces would be at sea, the theory of destroying the submarine bases becomes less attractive.

Naval sea-borne forces must operate in the same environment as the aggressor's submarines. Two wars have pointed up the vulnerability of surface forces to submarines. Further, as previously inferred, if naval strategists concede our inability to control any but vital sea areas and sea lines of communication, this concession paves the way for the

ubiquitous submarine armed with long range guided missiles to effectively support a potential aggressor's strategy of total war or international nuclear blackmail. Turning to the last point; historical examination of the potential enemy's facility for employing bluff or threat to achieve his aims leads to the conclusion that blackmail might readily become an international political lever of formidable proportion. Consider for a moment a cold war situation in which the two most powerful nations of the world have their strategic annihilation weapons "zeroed in" on each other, weapons which might be launched from some combination of concealed land bases and mobile submarine platforms. In such a situation one nation might forcibly destroy the other's will to resist without having to launch a single missile. Failing this the more adventurous nation might exact severe and debilitating concessions from the more "peace inclined" nation.

A cold war situation is cited to avoid the trap of thinking in terms of total peace or total war. In this connection, Clausewitz tends to mislead us by his definition of war. The situation cited might be described as the ultimate in opposing enemy capabilities. In this instance line dividing "peace" and holocaust is fine indeed.

Under this circumstance the necessity for constant surveillance of a potential aggressor's launcher installations whether land-based or sea-borne transcends all other defensive considerations except that of having an effective retaliatory force in being. Recent events would indicate serious national concern as regards the enemy's potential continental launching sites. Similarly, our naval strategy insofar as antisubmarine warfare is concerned must be directed toward knowing the precise location of all the aggressor's submarines at sea.

[redacted]

Sound, radar, and MAD (magnetic anomoly detection) are our three most important systems of detection, localization and target classification. All three have severe limitations although in many instances complement and reinforce each other.

Active sound is thwarted by the character of the sea which bends and attenuates sound rays with such severity that long range active sound systems have for all practicable purposes a low initial submarine detection probability. Passive sound systems suffer for their reliance upon some noise source. By properly sound mounting submarine machinery so that machinery noises are not transmitted through the hull and by exercising extreme care in the design of machinery passive systems can be effectively nullified.

Radar is severely degraded in high sea states while MAD has been largely restricted to localization tachniques.

Recognizing the limitation of known antisubmarine search techniques, total surveillance of ocean areas is not susceptible of achievement in the foreseeable future. Oceans comprise, nevertheless, the locii of points from which submerged attacks may be launched.

Failing of total ocean surveillance the problem of precisely locating all the enemy's submarines at sea remains. The present naval Research and Development program for dealing with this problem appears to consist of improving known techniques in detection and localization while simultaneously seeking to determine the nature of evidenced but not understood phenomena associated with the submarine's passage through the sea. Improving known techniques is a task of almost insuperable magnitude. Brute force methods have increased the size and power of active sonars but without a commensurate increase in

[redacted]

detection ranges. A similar struggle for grudging improvement in the detection ranges of radar and MAD continues.

Concurrently, considerable effort is being exerted toward unlocking the secrets of the several phenomena occurring with the submarine's passage. The question being probed is: "What is the nature of the submarine's trail beneath or on the surface?" In the meanwhile, the navy in filling its antisubmarine role is hard pressed to make initial detections or in having succeeded in this to convert a distant contact into a controlled situation. The result is that the oceans remain relatively secure sanctuaries for the submarine. It is the combination of the foregoing factors which contributes much to making the Polaris submarine the weapon system it is. Some satisfaction could be derived if even the approximate number of submarines at sea together with their approximate dispositions were known, but even this kind of intelligence is desperately meager and most difficult to obtain. Therefore, the navy may fall short of it's goal to control the submarine threat until science and technology provide the means to reverse the present trend. In the meanwhile, even greater effort must be devoted to the basic quest to understand what occurs beneath the sea.

Concurrently, a serious reappraisal of our overall ASW strategy must take place, for the present one evokes serious reservations as to its efficacy for even cold war situations.

A strategy for trailing potential enemy submarines at sea is proposed for consideration. Trailing and keeping under surveillance the enemy's submarines at sea would, if feasible, accomplish the same ends as would total surveillance if it were achievable. U. S. nuclear submarines equipped with modern sound equipment, both active and passive, would be ideal tactical platforms for this purpose since, as

[redacted]

true submersibles with high underwater speeds they can remain in close proximity to a submerged submarine under surveillance. Submarine listening barriers disposed close to the potential enemy's ports should have a high detection capability depending upon the concentration of submarines available for this purpose. Once detected the enemy's submarine could be kept under continuous surveillance, provided sufficient U. S. submarines were maintained at sea for this purpose, the latter being the assumption upon which the success of this type operation would hinge. In addition, a good case could be established for employing patrol aircraft in concert with our submarines to ensure continuous contact. If insufficient friendly nuclear submarines were available for a "barrier blockade", augmentation could come from snorkel types when the submarine to be trailed was also a snorkel type.

Another form a barrier could take would be that disposed across certain narrow seas e.g. Denmark Straits, or English Channel, which the enemy must penetrate to reach the open ocean. Moored sonobuoy barriers, cable powered and interrogated from shore stations, random floating sonobuoys augmented by submarines, surface ships and aircraft could be disposed to prevent the undetected transit of the enemy to the open ocean. In this instance, a high degree of air, surface and submarine coordination would be required; further, employing surface and air forces alone to maintain surveillance of any single submarine would require not only the nicest kind of coordination but a considerable expenditure of stores such as sonobuoys and explosive sound sources.

Devices similar to "squealer" affixed to a submarine's side and activated by interrogating techniques from a surface vessel could facilitate the tracking problem.

"End of confidential"

[redacted]

An intensive research and development effort enabling the navy to shift to a strategy of keeping potential enemy submarines under constant surveillance poses many problems. Also, from the Fleet viewpoint, the strain on our resources in submarines, ships and aircraft employing known detection techniques would be tremendous. Even if susceptible of accomplishment, this cold war strategy would not prevent a war with a nation determined to fight and could conceivably, invite an undeclared war of attrition at sea.

On the other hand, we live in the limbo of cold war that is neither real war nor real peace which calls for a positive strategy designed to nullify the enemy's capabilities. Total submarine surveillance prescribes a cold war posture that would not be limited in application but would serve effectively in the event of open hostilities.

Numerous substantial by-products of this strategy such as reduced requirements for convoy escorts are not discussed; nor are the limitations and ramifications of this strategy because of the limitless combinations involved.

Nevertheless, if total submarine surveillance is eschewed as a correct naval ASW objective we must not only rely on the means we have and present methods of strategic exploitation of these means but are largely committed to an indefinite continutation of this course of action - a course which has thus far proved inadequate.

ADDRESS BEFORE LEGISLATORS

MINNEAPOLIS, MINN.

Ladies and Gentlemen:

I cannot thank you enough for your thoughtfulness in inviting an old Captain of the good ship MINNEAPOLIS to be one of your guests today. I am sure that the officers and men of that ship when they hear of my visit here will be as happy as I am about it. You know the Navy League in New York had an idea along this line several months ago and conducted "Operation Remember" where they invited about fifty top Naval and Marine Commanders of World War II and about ten enlisted men who were Medal of Honor winners to a gala affair. It was a great thought and it was highly successful. Here today you are also conducting an "Operation Remember" in so far as the heavy cruiser MINNEAPOLIS is concerned. I am sure that your acceptance of these battle flags which I am about to present will be a permanent reminder of the exploits of the MINNEAPOLIS during World War II.

As a matter of information the MINNEAPOLIS was a heavy cruiser of the so-called 10,000 ton class with nine 8" guns in three turrets with eight 5" AA guns and a large number of 40mm and 20mm guns for use against those planes which tried to attack from relatively close quarters.

When I took command of the ship July 1943 she had already been in battle, had been torpedoed in the Solomons, and was now in the navy yard for repairs. Her personnel (about 1400) were in the vast majority Reserves. I think that of about eighty officers not more than one dozen were of the so-called Regular Navy. Although the crew were about evenly divided the Regulars were gradually being transferred elsewhere.

We left the west coast for Pearl Harbor in September and then during my period of command took part in that series of brilliant

fleet operations mostly under Admiral Raymond Spruance which moved Allied power from Pearl Harbor westward through the Marshall and Caroline Islands. It is the battle flags displayed by the MINNEAPOLIS in five of those battles which I wish to present today.

But before doing so I wish to give a short resume of what the U.S. Navy, assisted where possible by the Army and Army Air Forces, was endeavoring to accomplish. You will recall--although I must admit that it was about fourteen years ago--that the Japanese held the so-called Mandated Islands, i.e., the Marshalls, Carolines and Marianas Islands. They also held New Guinea and the Palaus.

The United States Pacific command commanded by Admiral Chester Nimitz, was charged with moving across the Central Pacific with the ultimate objective of isolating Japan and forcing it to surrender. The MINNEAPOLIS was a unit of this command.

The movement across the Central Pacific was made possible largely by the advent of the carrier task force in great strength. What was a carrier task force? Well it was a force based largely on carriers but composed also of battleships, cruisers, destroyers and other vessels with air striking power as the predominant weapon.

Largely through carrier striking power the U.S. Navy was able to gain command of the sea areas where desired and was therefore (a) able to move amphibious forces from place to place, (b) with these amphibious forces to seize necessary island bases, and (c) to establish on some of them airfields from which large numbers of land-based aircraft might operate. The point which I wish to emphasize here is the importance of the carrier striking force in modern warfare and

the vital need for insuring that the Navy's requirements in this matter are met by the Nation.

But to return to the battle flags. Since I have five of these to present I shall limit my discussion to those operations in which these flags were displayed.

The first flag represents the operations to seize Kwajalein Atoll. Let us see what the card says:

"THE NATIONAL ENSIGN DISPLAYED BY THE HEAVY CRUISER U.S.S. MINNEAPOLIS IN ACTION AGAINST TAROA (MARSHALL ISLANDS) ON 31 JANUARY 1944 AND AGAINST KWAJALEIN ATOLL (MARSHALL ISLANDS) FROM 1-6 FEBRUARY 1944 DURING THE SEIZURE OF KWAJALEIN."

In these actions the MINNEAPOLIS although not damaged was closely straddled by gunfire at Taroa, and was also the target of Japanese 20mm fire inside Kwajalein Atoll. However at Taroa she lost one junior officer who fell overboard while the ship was under fire, and at Kwajalein she lost one pilot and one Army artillery observer shot down by gunfire.

The second flag represents operations in the Truk area. Let us see what the card says:

"THE NATIONAL ENSIGN DISPLAYED BY THE HEAVY CRUISER U.S.S. MINNEAPOLIS IN ACTION IN THE TRUK AREA 17 FEBRUARY 1944 DURING WHICH TIME THE MINNEAPOLIS ASSISTED IN SINKING BY GUNFIRE THE JAPANESE CRUISER KATORI AND THE JAPANESE DESTROYER MAIKAZE."

Truk was known as the great bastion of the Pacific and here we were attacking it. However our carrier aircraft were highly effective, caught the Japanese by surprise, and destroyed their air power in the Truk area. Then Admiral Raymond Spruance (CTF 58) in the NEW JERSEY

with the IOWA, MINNEAPOLIS and NEW ORLEANS decided to seek out and destroy several crippled men-of-war. This was done, contact was made and the Japanese ships were sunk. However it was not too easy for the Japanese fired back, their shells fell close aboard the MINNEAPOLIS and their torpedoes passed so close aboard that radical maneuvering was necessary to avoid them. As it was, one passed just ahead of us and one just astern!

The third flag represents operations against the Marianas Islands. Let us see what the card says:

"THE NATIONAL ENSIGN DISPLAYED BY THE HEAVY CRUISER U.S.S. MINNEAPOLIS IN ACTION IN THE MARIANAS ISLANDS AREA 22-23 FEBRUARY 1944 DURING WHICH TIME HEAVY AIR STRIKES WERE MADE BY THE PLANES OF TASK FORCE 58 AGAINST THE ISLANDS AND THE CARRIER TASK GROUPS WERE SUBJECTED TO HEAVY NIGHT ATTACKS BY JAPANESE LAND-BASED AIRCRAFT."

These were most successful carrier strikes which succeeded in obtaining photographs of the principal islands and especially of Saipan and Tinian. However on our approach we were attacked all night by Japanese land-based aircraft but the night defensive capability of our carrier task groups was so great that we succeeded in shooting down about fifteen planes without damage to ourselves. What a night that was!

The fourth flag represents operations against the Palau Islands. Let us see what the card says:

"THE NATIONAL ENSIGN DISPLAYED BY THE HEAVY CRUISER U.S.S. MINNEAPOLIS IN ACTION AGAINST THE PALAU ISLANDS, 30 MARCH 1944 DURING WHICH TIME HEAVY AIR STRIKES WERE MADE AND MINING OPERATIONS CONDUCTED

BY THE PLANES OF TF 58."

We started on this strike from Pearl Harbor attacked the Palaus and returned to Majuro Atoll in the Marshalls a round trip of over 5,000 miles. This trip, while a most successful air raid in force, offered little excitement for our carrier planes drove off and destroyed enemy attacking aircraft.

The fifth and final flag represents operations against Hollandia and Truk. Let us see what the card says:

"THE NATIONAL ENSIGN DISPLAYED BY THE HEAVY CRUISER U.S.S. MINNEAPOLIS IN THE HOLLANDIA (NEW GUINEA) AREA 21-22 APRIL 1944 AND IN THE TRUK AREA 29 APRIL 1944 DURING WHICH TIME HEAVY AIR STRIKES WERE MADE BY THE PLANES OF TASK FORCE 58 AGAINST THE ABOVE AREA. ALSO DURING THE BOMBARDMENT OF SATAWAN ISLAND (CAROLINE ISLANDS) 30 APRIL 1944."

This operation had a triple objective. The objective in the Hollandia operation was the protection of General MacArthur's landing there against air and surface ship attacks. We remained off Hollandia until it had been secured by the SIXTH Army and then we returned to Majuro Atoll. We were attacked in return by six planes which got inside our formation but we shot them down without damage to ourselves. Then we shelled Satawan, a small island south of Truk which the Japanese were preparing for use by their air force.

After this we returned to Majuro where I was detached. Thus ended my wartime cruise in the MINNEAPOLIS.

And now, finally, what were these operations all about? Well they were all brilliant manifestations of sea power. The MINNEAPOLIS

was merely one ship out of many ships--literally out of hundreds of ships--which were all assisting in the great movement of our forces across the Pacific. To defeat Japan, it became necessary to carry the war to Japan, to destroy her lines of communication, to destroy her industry, to reduce her will to resist. This was not a simple task. It could only have been accomplished through the employment of sea power in overwhelming strength and in the ability of sea power to remain at sea for long periods of time.

You have traced with me the movements of our forces under the brilliant guidance of Admiral Spruance--you have seen how we seized this base and that base, ever moving towards the Japanese mainland.

And, therefore, you have also seen the value and employment of sea power. We need sea power today--we will need it tomorrow.

Leaving the ship I said to the crew in part

"This then is our record since then. And it was accomplished, as all of you know, without the loss of a single man on board by enemy shells or torpedoes. Evidently we were favored by Divine Providence, for enemy shells and torpedoes were close enough to have caused damage had the Creator so willed. I feel confident that under your new Captain this good fortune will ever remain with you so that you will all return to your family and friends once again.

"I have come to say good bye to as fine a body of men as ever trod the deck of an American Man-of-war. I have seen you with shells bursting around you and over you; with torpedoes passing close aboard. Did you flinch, did you quail? You did not. Instead, with your hearts beating true and your eyes firm on the enemy, you gave him hell until he died as the blue waves covered him.

"You are a brave and hardy lot, and I leave you with the faith that you will carry on - that the good ship Minneapolis will ever be in at the kill - that victory will be ours in God's good time."

If I have succeeded in getting across to you and have convinced you of the necessity of sea power, I shall feel that my presence here

today has been profitable to the National Welfare and that these flags representing some of the battles in which the MINNEAPOLIS was engaged, will have found a safe harbor at last.

And now Mr. Mayor I present to you and to the splendid city of Minneapolis which gave its name to this famous heavy cruiser, these battle flags with the hope that they will be an inspiration to future generations and will serve as a reminder of the valor of their fathers.

N D.

PRESENTATION ON

THE ESTIMATE OF THE SITUATION

DELIVERED BEFORE THE

NAVAL WAR COLLEGE

BY

CAPTAIN R. W. BATES, U. S. NAVY

THE ESTIMATE OF THE SITUATION

Gentlemen:

I have been asked to discuss today the "Estimate of the Situation" as based on the Armed Forces Estimate Form and Sound Military Decision. This is a big order and cannot be adequately covered in the 2 periods alloted to me, but I will try. Part of what I have to say to you will be very familiar, while other parts may be new. Should you manage to absorb any portion of my discussion and be able thereafter to use it, I will consider my time well spent.

In presenting the Estimate to you, I plan to -

(a) Discuss briefly the four steps in the solution of a military problem.

(b) Discuss the fundamental military principle.

(c) Discuss in full, the first step - the "Estimate of the Situation for selecting the best course of action which becomes the Decision."

Studies of the subject of the solution of problems indicate that the successful solution of a problem - called in military language, the successful attainment of an assigned military objective - involves the application of mental effort in four distinct steps:

Step (1) The selection by the commander of a correct objective by achieving which he may attain his assigned objectives. Such selection includes the determination, in proper detail, of the action required.

This means that in the first step, the commander determines what he is going to do to accomplish the job his commander has given him to do. It is with the selection of this objective that we are concerned in the "Estimate of the Situation" and the objective selected is stated as the Decision.

Step (2) The resolution of the required action into military operations.

This means that the Decision is broken down into jobs (tasks) which are to be assigned to subordinate commanders.

Step (3) The formulation of the Directive, with the intention of immediately inaugurating planned action.

This means that once the Decision has been broken down into tasks, these tasks are to be issued to certain commanders of own command in the form of a Directive.

Step (4) The Supervision of the planned action.

This means that once the Directive has been issued and placed into effect, the commander will have to supervise its performance.

Although the above refers to a military objective, isn't it, in fact, what we are daily doing concerning the matters of ordinary human life? When something occurs which requires solution, don't we first decide in a broad way what we are going to do to get the job done right; then don't we consider what has to be done to insure that what we have been directed to do will be done; third,

if others are concerned in this with us as our helpers, don't we call them in and tell them what we are going to do and how and what we expect each of them to do; and lastly, once our helpers have started out to do what we have given them to do, don't we wait around at some designated place and await reports from them so that if things are not going as we planned, we can make appropriate changes?

Well, today and tomorrow, I am going to endeavor to show the whole mental effort as indicated in S.M.D. involved in the first step of deciding what to do to accomplish a task given to us by some one in authority. This is called the "Estimate of the Situation." The point to be remembered here is that in a problem of the first step, all that is arrived at in the Estimate of the Situation is the Decision. In other words, having been assigned a task to do, we here determine what to do to accomplish this.

In order to facilitate this determination, the Naval War College has developed what is known as the Fundamental Military Principle. By the use of this Principle, any military or other problem can be solved with a reasonable expectancy of accuracy - the expectancy of accuracy depending, of course, on the character and background of the solver. As a valid guide, it encounters no exception in the field it purports to cover. As a practical guide, it brings to attention, in broad outline, all the causes and effects which are unsolved in the problem. The two major applications of this Principle relate to the selection of a correct

military objective (our Decision as to what to do to accomplish the task assigned us by our superior) and to the determination of effective military operations to attain this objective. (The breakdown of our Decision into tasks for our command to execute).

The use of a principle as a guide in solving military problems is not a mathematical process. Since a principle must be a statement of fact; it may be, and in the physical world often is, expressed in terms of mathematical formulae. But even in such cases, a formula is of little use to the engineer or scientist unless he can assign proper values to the various factors. This he does by thought based on his experience and professional knowledge. In many cases, this may prove a simple procedure involving little conscious mental effort. Herein lies the difference in the application of a principle of physics or chemistry and a principle for the solution of human problems. In the latter case, human factors will often be involved which will never be exactly determinate. In the case of a military principle, the mental powers of an enemy commander may be a factor, or a component, thereof.

It is thus clear that the application of a principle, and the value to be derived therefrom, are dependent upon a proper evaluation of all the factors related to a particular situation. The principle furnishes a procedure or guide in solving problems; the vital point in the application or use of the principle lies in the evaluation of the cited factors.

A principle involving human affairs, therefore, is merely a guide for reaching sound decisions or formulating effective plans. It does not supply the answer. It is only of use as an aid to judgment. It suggests a procedure--that is, the evaluation of each of the pertinent factors in its relation to each of the other factors--for the exercise of sound judgment, based on experience and knowledge. The soundness of the conclusions reached will depend on the extent of such experience and knowledge, and the extent to which logical thought was applied to the evaluation of the various factors.

It is only by the mental power of the commander that the effect desired is attained. A principle in military affairs can only establish a framework for the logical thought of the commander.

Let us see what this Fundamental Military Principle is. Here it is!

Show: B42-602

The attainment of a military objective (the creation or maintenance of a favorable military situation) depends on effective operations. Effective operations involve the salient features (a salient feature is one that sticks out noticeably) of

Effective action with relation to
correct physical objectives,
Projection of action from advantageous
relative positions,
Proper apportionment of fighting strength, and
Ensurance of adequate freedom of action;

each fulfilling the requirements of

Suitability, as determined by the factor of the appropriate effect desired,

Feasibility, by reason of relative fighting strength, as determined by the factors of the means available and opposed, influenced by the factor of the characteristics of the Theater of Operations, and

Acceptability, as determined by the factor of the consequences as to costs,

which factors are, in turn, dependent on each other.

Cut: B42-602

Now let us see in simple language what this means. In the first place, I suppose that it would be well to first define some of the terms in the above Principle. For example -

(a) Objective - This is the end towards which action is being or is to be directed. As such, it is an objective in the mind and is therefore a situation to be created or maintained.

(b) Physical Objective - This is the tangible focus of effort - that towards which the action is directed. It is, therefore, an objective in space and is always an object, be it only a geographical point.

(c) Relative Position - This is the geographical location of forces with relation to one another. It is of great import because its fundamental significance lies in the fact that position is the basis of movement, for movement is merely a change in position. Speed is the rate at which movement takes place. The particular factors to be reckoned with are, therefore, time and space.

(d) Apportionment of Fighting Strength. This means the proper assignment of fighting strength so that a task may be adequately accomplished. A commander to whom an objective has been assigned should apportion his available resources in such manner as to provide the requisite strength at points likely to be decisive, without unduly weakening other points.

(e) Freedom of Action is, as its name implies, the ability of a commander to move freely without undue restrictive influences. That enemy interference will, to a greater or less extent, impose restrictions on freedom of action, is to be expected. Restrictions may also be imposed by physical conditions existing in the theater of operation, and by deficiencies and omissions which are within the field of responsibility of the commander to correct.

(f) Suitability means that each operation must point towards the end in view. Thus a tentative solution of a problem must solve the problem, otherwise it would not be suitable.

(g) Feasibility means that, considering the relative strength of your own forces and those of the enemy as well as the character of the theater of operations, you can or cannot accomplish the task assigned.

(h) Acceptability means that if you solve the problem, will your losses in men, ships, etc. be satisfactory? That is, is the gain worth the loss?

But to return to our discussion of the Fundamental Military Principle. This principle was evolved from the idea that, to quote "Sound Military Decision," -

Show: B47-1521

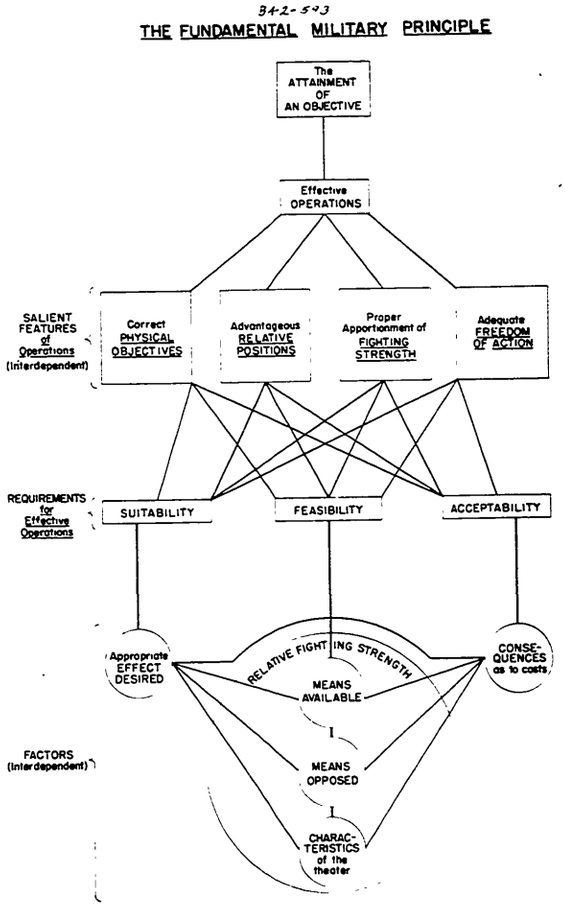
"A plan of military operations may be regarded as reasonably effective if the direction or geographical trend of the effort provides for proper action with relation to the correct physical objectives; if the force concerned utilizes positions advantageous in relation to those of the opponent; if the fighting strength is so apportioned as to provide for requisite power at points likely to be decisive, without undue weakening at other points; and if future actions, in seeking the effect desired, will be unhampered

by obstacles with which the force cannot cope. These essentials apply to all of the various combinations of circumstances, i.e., situations, which may materialize as action progresses and the original situation unfolds."

Cut: B47-1521
Show: B42-593

Although, in my mind, the Fundamental Military Principle is a relatively simple conception and can be readily explained with words alone--still, in other minds, it is not so simple. For that reason, the War College developed three diagrams which explain the Principle diagrammatically.

B42-593



The above diagram, which I call the first diagram, shows the general principle and indicates the general steps that must

be followed in attaining an objective. Note that the lower half called Factors (interdependent) is, in fact, the basis for solution of the problem, embracing as it does, the job you have to do, the relative fighting strengths (the means available and means opposed as influenced by the character of the theater) and a conception as to what losses will be acceptable.

Then note that the requirements for effective action are the same suitability, feasibility and acceptability referred to previously in the discussion of the Fundamental Military Principle and that the salient features of correct physical objectives, advantageous relative positions, proper apportionment of fighting strength and adequate freedom of action are also those discussed heretofore. The effective operations are tentative solutions, either for the selection of the objective or for the determination of effective operations to be discussed later, and the attainment of an objective is the Decision or the tasks for executing the Decision depending upon whether you are solving an Estimate of the Situation or whether you are breaking down the Decision into tasks for assignment to subordinate commanders.

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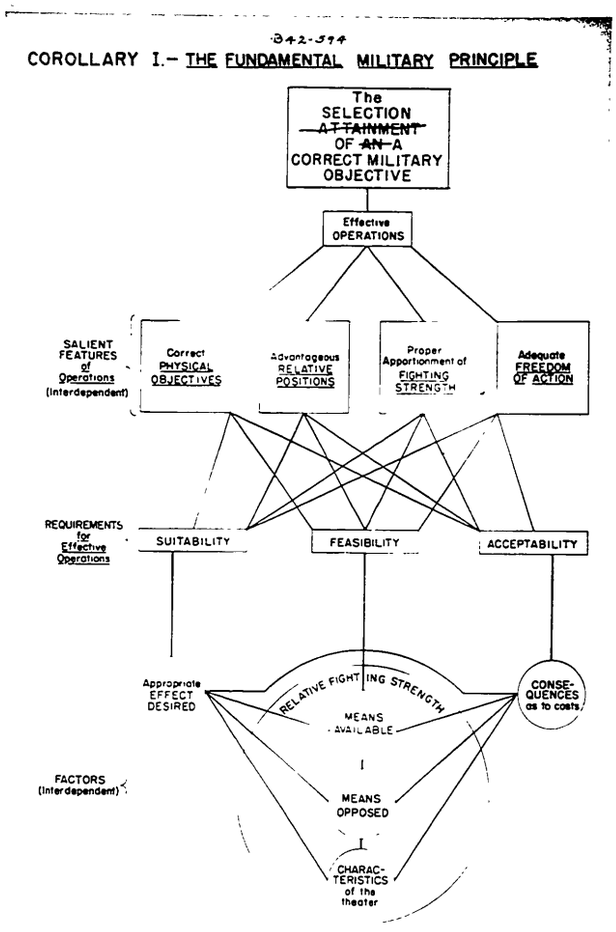
The second diagram covers the corollary Principle of the correct military objective and is indicated below.

Show: B42-594



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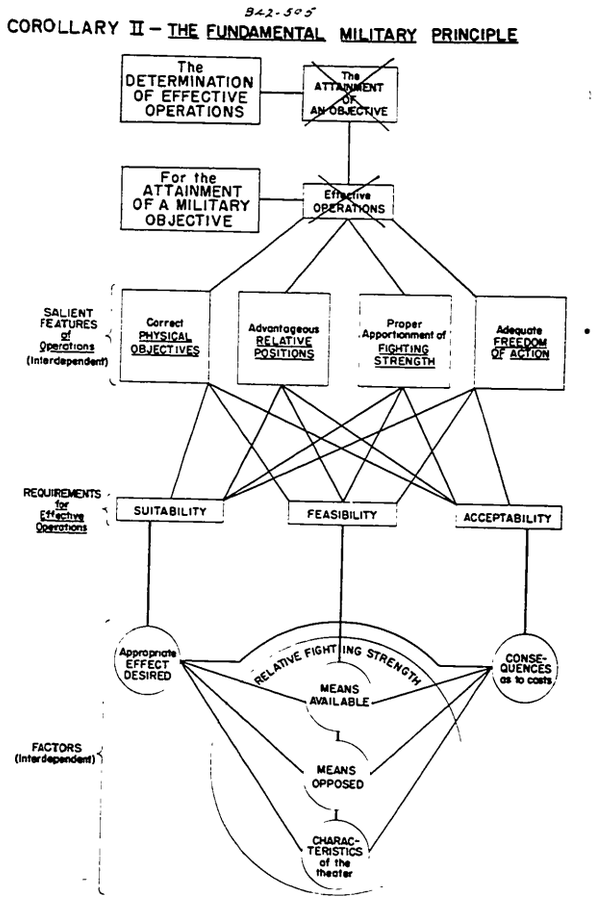
The third diagram covers the breaking down of the Decision into tasks and is called the corollary Principle of Effective Military Operations. It is indicated as shown below.

Show: B42-595



Cut: B42-595

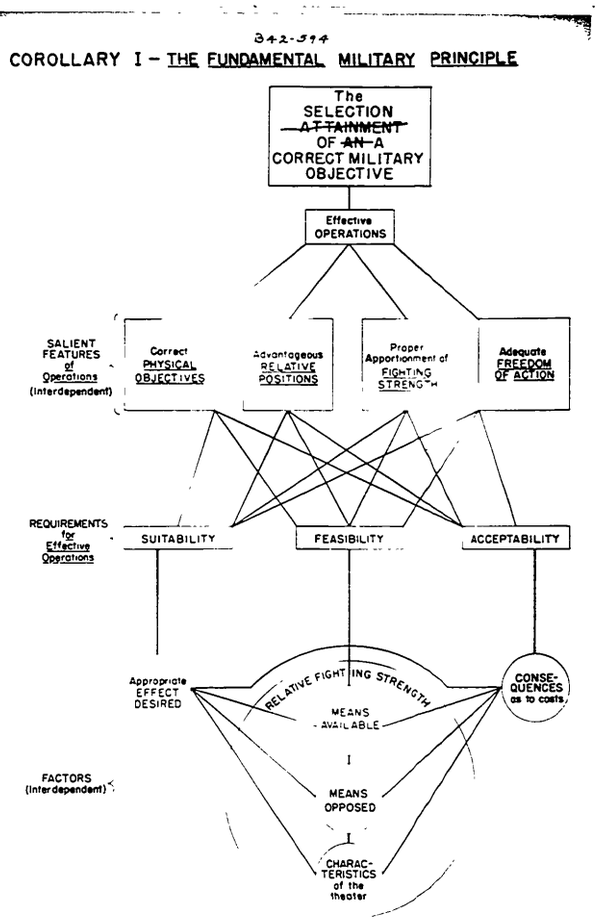
In the Estimate we are concerned with the first corollary only, but I won't discuss it further here, as its use will be explained as we solve an Estimate of the Situation.

I will now show the method indicated in the War College publication Sound Military Decision solving an Estimate of the Situation.

The first thing that we wish to do in solving a problem is to "establish the basis for solution of the problem." This basis involves an "understanding of the appropriate effect desired and of relative fighting strength."

Show: B42-594

Let us start with Corollary 1 to the Fundamental Military Principle.



Show:B41-444 Cut: B42-594

An understanding of the appropriate effect desired from the standpoint of suitability requires -

(1) A grasp of the salient features of the situation. (The summary of the Situation).

(2) A recognition of incentive to solution.

(3) An appreciation of the objective assigned, which objective, if attained, will satisfy the incentive.

Let us take each of these in order. The salient features come from the problem if in the War College, and from the situation, if at sea. In the War College, in the "statement of the problem," we give a great deal of information concerning not only the pertinent facts which apply to the immediate solution, but also considerable background. This background is not necessary for inclusion in the summary, but is solely for information. Let us see what the S.M.D. says in regard to this.

Cut: B41-444
Show: B43-102

Show: B43-97

"The summary of the situation may include statements as to present activities of own and enemy forces. It may recite significant occurrences. It does not attempt to compare or to deduce. The commander extracts, from the information furnished by higher authority, such data as are pertinent to his own problem. He includes these data in his own summary, supplementing them by information from other sources, to the extent deemed advisable. In the exercise of judgment as to the content of his summary, the commander is influenced by the fact that the summary is the point of departure for visualizing the appropriate effect desired."

Cut: B43-102

Cut: B43-97

The gist of the whole matter is that many users of S.M.D.

when solving a problem feel that they have to put down everything when summarizing the situation. As a matter of fact, they would be well advised not to do so, as it will have to be digested later and it is preferable to thoroughly understand the situation at the start.

Now we will pass to the incentive. S.M.D. says, in part,

"Recognition of the Incentive. In basic problems, the commander finds his incentive in directives received from higher authority. Under the procedure of the Estimate, a notation of that fact, with a citation of the directive(s), is all that is required to indicate that the commander has formed a proper recognition of his incentive."

Show: B47-1520

An incentive may arise -

(1) By reason of a directive issued by higher authority. Armed Forces Estimate says: "Set forth in orders or instructions from higher authority."

(2) From the fact that a decision already reached by the commander has introduced further problems, and

(3) Because of the demands of the situation.

Armed Forces Estimate combines 2 and 3 into: "Deduced by him from his instructions and his knowledge of situations.

Cut: B47-1520

In the War College, the students are nearly always concerned with incentives arising from directives issued by higher authority.

Most large problems in the Fleet are similar in incentive to these War College problems.

We now pass to the appreciation of the assigned objective. This is the primary consideration in understanding the nature of the problem. This is so because appreciation of the objective involves a grasp of the salient features of the existing situation (to be maintained or changed) and a recognition of the incentive.

Show: B43-104 Show: B43-99

S.M.D. says on this subject -

"The commander's basis for solving the problem is not complete, however, with merely a statement of his own objective. Full visualization of the effect desired is not obtained until the commander appreciates not only the result which he, himself, is required to accomplish, but also the next further result which is expected to eventuate as, at least in part, an effect of his accomplishment. His goal, as an "effect desired," includes not only the effect desired of him by higher authority, but also the effect which his immediate superior desires to be accomplished by that superior's entire force.

"Occasionally, full appreciation of the commander's objective will require, also, consideration of the further effects desired by yet higher successive echelons."

Cut: B43-99
Show: B43-105

It should be evident from this that the appreciation of the objective is not easy. It takes most thorough analysis. The

assigned task must be studied and the objective deduced. It is often not sufficient to take the verb and convert it into a noun. S.M.D. gives several examples. For example "to escort" should not be changed at this point to "the escorting." Instead, analysis would show that escorting was a protective measure and was done to protect shipping. Therefore, the objective would properly be "the protection of the convoy." Of course there are times when it is quite correct to use the noun which is derived from the verb such as "the destruction of" for "to destroy" as that plainly indicates what the objective is. But I should like to caution you on this point to analyze the task carefully so that the full meaning is well understood.

Cut: B43-104 Cut: B43-105

Having appreciated the assigned objective, the objective must now be studied with relation to the further effect desired- that is with relation to the commander's general plan. This must be done to insure that you appreciate what the accomplishment of your objective is to contribute towards this plan.

The Mission can now be formulated, for your assigned task is known and the general plan of your superior is also known. S.M.D. says -

Show: B43-106 Show: B43-100

"The linking of the commander's assigned task to the general plan of his immediate superior permits the commander to formulate his mission. His assigned task becomes

the task of his mission; his superior's general plan becomes the purpose of his mission. In this manner, he crystallizes into a clear statement the part of the common effort which he is to carry out, indicating the assigned objective he is himself to attain, as well as the further objective to whose attainment his effort is to contribute.

Cut: B43-100
Show: B43-101

The mission thus formulated, clearly indicates the appropriate effect desired, i.e. - the factor which establishes the requirement of suitability as a basis for the solution of the problem. That is, that any courses of action must be suitable to the appropriate effect desired. As a matter of interest, a course of action is a tentative solution of the problem.

Section 2(a) 1

Cut: B43-106

Cut: B43-101
Show: B43-594

Now we must determine the other half of our "basis for solution of the problem," that of Relative Fighting Strength. This is called in the Armed Forces Estimate of the Situation Form "Considerations affecting the possible courses of action." Thus we establish the means of determining Feasibility of accomplishment and Acceptability of consequences as to cost of courses of action, which are to be considered later in the Estimate. When courses of action are being considered, they must be feasible of accomplishment and acceptable as to costs.

S.M.D. provides a most thorough and comprehensive list of factors which, when correctly analyzed, will give a remarkably accurate estimate of the strength and weakness factors of both your own side and that of your enemy, which affect the possible courses of action. I won't go into a discussion here of each of these factors, but I will go into one of them, i.e., logistics, which might be termed status of supply. Logistics support is of primary concern to the commander. In the naval service, this is particularly true of the strategical estimate. This factor also may have a decisive bearing on a tactical estimate. At the Battle of Surigao Strait, the factor of a shortage of armor-piercing projectiles, seriously governed the Commander's Battle Plan. Logistics support, therefore, exercises a dominant influence upon the relative combat power of armed forces. It is concerned with the availability, adequacy, and supply of the following:

Material: Items such as fuel, ammunition, weapons, aircraft, food, clothing, spare parts, repair materials, animals, and general supplies.

Personnel: Military and civilian; number and quality of replacements, as well as reinforcements.

Facilities: Factors such as bases; manufacture and repair facilities, afloat and ashore; shelter; sanitation; hospitalization; recreation; transportation; education; counter-espionage; counter-propaganda.

The limitation imposed upon operations by logistics represents the final limit of a commander's plan of action.

Whenever we find that one of these factors has no bearing on our problem, we should not leave it out, but should, instead, list it and say that it is not applicable.

When we study the factors more directly applicable to armed forces, it is often advantageous to list all of the information concerning guns, torpedoes, depth charges, range, life, etc., in a table.

Whenever the ships are not known, it is best to compare the probable types, in a general way, type for type. Thus, if we had, for example, 1500 ton destroyers,and our information was that the enemy had 1500 ton destroyers, in opposition, we can compare ours against probable theirs.

The study of hydrography and topography is highly important, as the characteristics of the theater of operations exert an influence, sometimes paramount, upon the possibility of attaining the objective and upon the strategical and tactical operations that may be employed.

The study of weather is vital, as it affects the use of aircraft, the employment of light forces, the use of smoke, freedom of action, the effect of spray and gases, and seriously affects all planning. Note the effect the bad weather had on your operations in the North Atlantic in Op Prob. 4.

Having finally analyzed all considerations affecting the possible courses of action, the pertinent points should be brought together in a series of "evaluations and conclusions" - not in a mere list of facts. These series of "evaluations and conclusions" indicate where the strength and weakness of each side lie. Strength factors for one are not normally entered as weakness factors for the other, but rather imply that weakness. S.M.D. says -

Show: B43-115 Cut: B43-594
Show: B43-125

"With the circumstances attending his particular problem clearly in mind, the commander carefully reviews each of the factors of fighting strength in the theater; he classes each as either a strength or weakness factor for himself or his opponent and enters it in the proper column. A strength factor for one is not necessarily entered as a weakness factor for the opponent:- what is required is a well-digested summary of the factors which give to either side an advantage or a disadvantage as compared to the other."

Cut: B43-115 Cut: B43-125
Show: B43-116
Cut: B43-116
Show: B43-1211
Cut: B43-1211

Section 2(b)

We will now discuss the "enemy capabilities." This is Section 2(b) of the Armed Forces Estimate. We cannot do better

in discussing this subject of capabilities than to read what S.M.D. says on that point -

Show: B43-132

"Capabilities, in the meaning applicable herein, indicate actions which the force concerned, unless forestalled or prevented from taking such actions, has the capacity to carry out. Such potentialities of the enemy are, of course, among the vital factors to be considered in estimating the situation. In his estimate, however, the commander's interest is not confined to what the enemy will probably do; probabilities are subject to change, and do not, therefore, cover the whole field of capabilities. The commander is not exclusively interested in what the enemy may intend to do, or even in what the enemy may be known, at the time, to intend to do; such intentions are also subject to change. The commander is interested in everything that the enemy can do which may materially influence the commander's own courses of action.

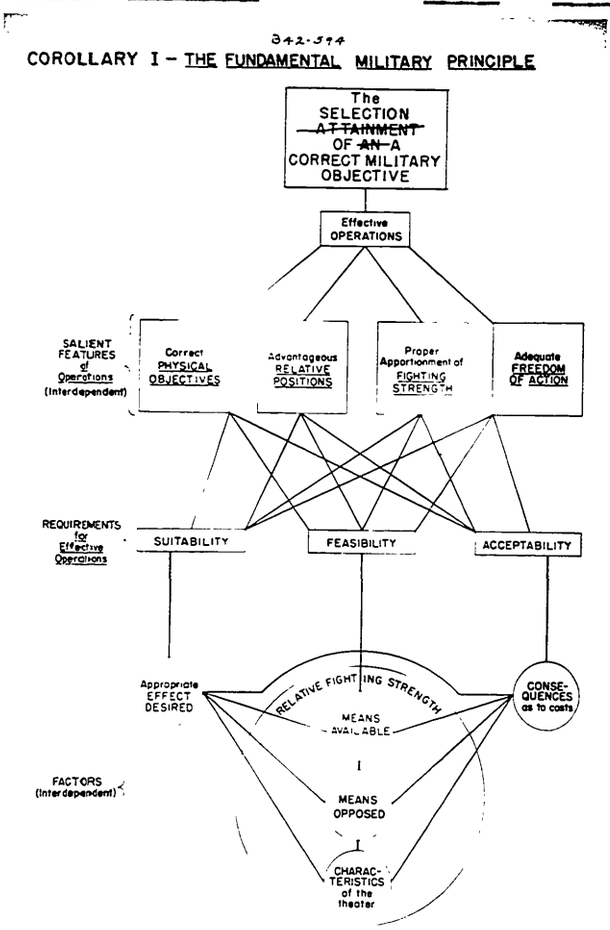
"In reaching a conclusion as to enemy capabilities, the commander makes an estimate from the enemy's viewpoint and considers that the enemy commander, faced with the counterpart of his own situation, is endeavoring to attain objectives in furtherance of his own mission. Each commander is endeavoring to create for himself a favorable military situation, and to prevent his opponent from

succeeding in the same intent. The physical objectives for each may be the other's armed forces; certain positions, sea areas, harbors, or territory may also be likely physical objectives."

Cut: B43-132

Note the all-important line "the commander is interested in everything that the enemy can do which may materially influence the commander's own courses of action." This is the key to this whole section. It is a study of what the enemy is capable of doing.

Show: B43-146 Show: B43-594



In the first place, the enemy's situation must be summarized. First, we determine the appropriate effect desired by studying the salient features of the situation and by appreciating the assigned objective.

In determining the nature of the effect desired we are, to all intents and purposes, determining the enemy appropriate effect desired. This is necessary because we must determine, as best we can, what the enemy's assigned objective is, in order to select an objective or objectives which will accomplish this. Thus, on the slide of the Corollary I, the term appropriate effect desired should be changed to read enemy's appropriate effect desired - the relative fighting strength remains the same. This is the basis for the solution of the enemy's problem.

In determining this effect desired, attention is invited to what S.M.D. says about this. -

Cut: B43-594
Show: B43-133

"The first mental act toward determining the effect desired by the enemy is to form a reasoned opinion as to the situation which the enemy wishes to maintain or to create. The maintenance or creation of this situation, existent or to be brought about, is an enemy objective."

Note what this says - "the first thing to do is to form a reasoned opinion as to the situation which the enemy wishes to maintain or create. The maintenance or creation of this situation is an enemy objective." Also this objective may serve

as the purpose of the enemy Mission. However, it is generally unwise to establish an enemy mission - it is unwise to be unduly specific,as this limits the mental effort of the commander and might cause him to overlook some enemy capabilities.

Cut:	B43-146	Cut:	B43-133
Show:	B43-147	Show:	B43-148
Cut:	B43-147	Cut:	B43-148
Show:	B43-149		

We now take up the survey of enemy capabilities. Here our basic information is, to quote S.M.D., "conjectural" and we, therefore, find that we have to study the strength and weakness factors to determine what the enemy might do because of his advantages and disadvantages. Here we list everything that we consider the enemy capable of doing with relation to us which will affect our courses of action. Sometimes we cannot see clearly what broad courses of action he might follow, but we can see clearly what operations he might do against us. We know our weak spots and it is here that you may expect him to strike. Out of these operations, we may find some which naturally group together and lead directly to the formulation of a course of action in the reverse.

Show: B43-137

The enemy courses of action having been listed, they are now tested for suitability, feasibility, and acceptability. Note that in making this test, we are not as demanding as we were with our own courses. This is because the enemy's effect desired is

not necessarily exact - it is an approximation, and it is hoped that as such, it is reasonably accurate.

The courses of action are now listed, if possible, in order of priority.

Cut: B43-149 Cut: B43-137
Show: B43-138

S.M.D. says in this regard -

"The previous analysis will have indicated, at least, in some cases, the degree of suitability and feasibility, and will have enabled the commander to form a considered opinion as to any preference, from the enemy viewpoint, on the basis of consequences as to cost.

"In many instances, therefore, it will be possible to arrange retained enemy courses in order of priority, i.e., the more likely being listed before the less likely. In case of doubt, the higher priority is awarded by the commander to enemy courses which are more dangerous from his (the commander's) point of view."

Cut: B43-138

Having completed Section 2(b), we take up Section 2(c), "own courses of action." In the Armed Forces Estimate Form it is customary to take up enemy capabilities first. However, in S.M.D. the commander may assume the initiative when he has the fighting strength to compel the enemy to conform to his plans. This is important. The commander is not constrained to take up this order always. It may be desirable to take up the enemy

capabilities first. As SMD says -

Show: B43-126

"Occasions may arise when consideration in the reverse order is preferable." Sometimes the prior consideration of enemy potentialities has the advantage of making the commander's estimate more complete with respect to the obstacles which he is to overcome. Furthermore, when the effectiveness of his future action is seen to depend chiefly upon what the enemy can do, or when the initiative lies manifestly with the enemy, and when the commander's mission requires him to frustrate enemy action, rather than to assume the initiative himself, the prior consideration of enemy courses of action may be indicated."

Show: B43-139 Cut: B43-126

The first thing that we do is to analyze the assigned objective. This is because when we appreciated it as previously discussed, all of the information we had was contained in the salient features of the situation, and our appreciation was based on that information. However, in the study of the "Considerations affecting the possible courses of action", we gained considerably more information,and it is now advisable in the light of that additional information to restudy the mission. Both the task and the purpose should be re-examined. With the new information available, we now have a much better idea of the location and strength of the enemy forces as well as the area in which they are operating. As S.M.D. says - "Now obstacles to success which

could not be fully appreciated before can be examined against the background afforded by visualization of the enemy's ability to oppose the attainment of the assigned objective."

Sometimes this analysis is short - that is in simple estimates - but on occasions, it is quite long - the whole picture of our problems must be thoroughly hashed over so that we can visualize exactly, the difficulties confronting us in attaining our objective. By this thorough analysis, we will find ourselves much better able to visualize tentative courses of action for the accomplishment of our assigned objective. Our study of the sea area in which we plan to operate, may build up in our minds, ideas which could only spring from past experience or from study, or from both - likewise, our study of the forces available on both sides might also be productive of ideas for solving the problem of attaining our assigned objective. In other words, our re-study of our objective is necessary because, as we labor on our problem, more and more information will be flowing into our brains. In the end, the solution of one of these problems is not simply a mechanical proposition where we drop in a penny - or where we follow a form blindly and out comes the answer. No! That most certainly is wrong. The solution of a military problem - in fact, the solution of any problem - is difficult. It requires the use of mental power - or in other words - of sound professional judgment, and the solver must always keep alert to insure that he thoroughly analyzes and keeps analyzing his objective.

Cut: B43-139 Show: B43-594
Show: B43-141

Having analyzed the assigned objective, we now visualize and select tentative courses of action or solutions to our problem. These are obtained primarily by "reflective thinking", but this reflective thinking is stimulated,not only by experience and study as previously stated, but also by a consideration of the four salient features of the Fundamental Military Principle. The combination of these three (experience, study and the F.M.P.) in the mind, makes the selection of a course of action less tedious than it might otherwise be. It would be preferable if courses of action could be chosen which completely accomplished the assigned task. However, it is not necessary that they do so. It is sufficient if they contribute towards that accomplishment. However, if they only contribute, more than one will be necessary to do the job - or if more than one combined together still does not accomplish the motivating task and other contributory courses of action cannot be found, then the objective will have to be changed to a lesser one.

Before leaving the subject of the expression of courses of action, it might be profitable to give some examples of words which are suitable for use. The initial expression of a course should be simple; whenever possible, it should be in terms of accomplishment; and it should indicate a general method for achieving the full effect desired. The following are examples of naval terms which are useful in formulating courses of action.

It must be understood, of course, that the list which will be given does not pretend to be a complete one.

The first list illustrates some terms of accomplishment:

To blockade, to capture, to contain, to control, to defeat, to defend, to delay, to deny, to destroy, to divert, to drive off or out, to evade, to fix, to gain, to harass, to hold,to interrupt, to inflict loss or damage to, to locate, to maintain, to neutralize, to occupy, to prevent, to protect, to reduce the speed, strength or superiority of, to repel, to secure, to seize, to sink, to threaten and, finally, Admiral Halsey's "to pulverize."

Sometimes it is necessary or desirable to employ terms of operations. Among such terms are:

To attack, to bomb, to engage, to establish, to interpose, to investigate, to observe, to operate, to organize, to pursue, to sweep, to cover, to escort, to patrol, to raid, to scout, to screen, to support.

Terms of movement may sometimes have their place, and are illustrated in these words:

To advance, to concentrate, to disperse, to join, to proceed, to retire, to retreat.

The grouping given above is,in some cases, arbitrary. Some words may be used in two categories. Much depends on the context. What is the effect desired? What new condition will exist when the planned action is successfully concluded?

In thinking of terms of operations and terms of movement, it is desirable to point out that much depends on the state of mutual understanding which exists within the organization. If the indoctrination has been thorough, so that a satisfactory state of mutual understanding exists throughout the force, the commander may, on occasion, employ terms of operations, and even of movement, with full confidence that the effect which he desires will be understood and accomplished. Such terms then become in effect, terms of accomplishment. The danger in their use in temporary task organizations is that mutual understanding in such organizations does not always exist to a satisfactory degree.

It sometimes happens, particularly in problems of large strategical scope, that very few or no courses of action may be found which solve the problem, and that it is necessary to resort to Partial Courses of Action. Partial courses are those which indicate concurrent or successive action along broad lines. They are of the same general nature as courses of action, and are expressed in the same way, but, as their name indicates, they state only partial solutions of the problem.

Each tentative course of action will have to be tested for suitability, feasibility, and acceptability and any one which does not satisfy these tests must be rejected. In this connection, S.M.D. says -

Cut: B43-141 Cut: B43-594
Show: B43-129

"For a competent commander, the mental power to envisage solutions of a military problem is so much

grounded in experience that appropriate suggestions are most likely to occur; in fact, discriminating thought with respect to military problems, is natural for such a commander. This immediate discrimination is, however, merely the preliminary test. It prevents setting up wooden soldiers, only to knock them down, but it does not necessarily subject each suggested solution to a thorough analysis.

"The commander may apply the tests to each course of action as it occurs to mind. This procedure, however, may be rendered impossible by the fertility of suggestion; perhaps the commander has thought of several courses of action almost simultaneously. It is, therefore, often better to apply the tests to all of the courses of action, in turn, during a separate stage of the process of thinking. This is the procedure indicated herein, as standard, by the sequence of steps in this section of the Estimate. The process of testing, itself, may bring to mind those combinations of courses of action previously referred to."

Cut: B43-129

It is sufficient cause for rejection if the course does not pass any one of these tests. It is customary to test for suitability first. The course must be suitable to the appropriate effect desired. If it is not, it is rejected and no further test is necessary.

Show: B43-145 Show: B43-131

Now having tested our courses and retained some - one or more - we finally list them - taking stock on the basis of suitability, feasibility and acceptability as to the preference of one course over the other. If we happen to have some courses that are not complete solutions in themselves, we may group them together into one course if we so desire. Note I said "may" group them. Sometimes it is inadvisable to do so because it may be easier to compare our own courses of action against those of the enemy if they are not combined.

Cut: B43-145 Cut: B43-131

SECTION III

Analysis of Opposing Courses of Action

We must now determine which of our complete courses, or what combination of partial courses is our best course. This is a most important process and consists, to quote S.M.D. "of executing in imagination the plan contained in each of the Commander's courses of action against that in each of the enemy's." This executing in imagination does not mean that we are not to work out this comparison on paper, but are rather to think of it in the mind. No, it doesn't mean that. What it means is that we are to execute our course on paper against each of the enemy courses in turn. We do exactly on paper what we plan to do, in fact, with our ships and planes, and then we write down what we imagine the enemy will do when he discovers the action we are taking against him. This is the process which is normally fol-

lowed when the initiative lies with us.

However, should we decide to imagine that the enemy has the initiative, we would execute the enemy's courses against ours. This latter method is usually used when the enemy can take action to frustrate ours. Note that S.M.D. says, in this connection -

Show: B43-158

"The comparison of plan against plan thus far has been restricted to the method whereby the commander takes the initiative with each of his own retained courses of action. Another method is to imagine the enemy as taking the initiative, carrying through each of his courses against each of the commanders' courses. This method is applicable, for instance, to cases where the enemy is able to initiate action which, by its nature, would frustrate the execution of any of the commanders' courses. The choice of methods is a matter of judgment."

Cut: B43-158

In this discussion of executing our own courses against the enemy's courses or vice versa, your attention is invited to another quotation from S.M.D., to wit -

Show: B43-157

"The examination into enemy capabilities is not complete if the Commander puts himself in the enemy's place merely for the purpose of estimating the original situation from the enemy's viewpoint."

Cut: B43-157

In other words, we are to do more than just put ourselves in our proper, or shall we say, assigned places, and wave our fists at the enemy. We have to actually execute our plan against the enemy's, and then we must visualize, not only what effect this action of our will have on the enemy, but also what he will do to counter our action. By so doing, we can visualize whether our plan is going to be fully effective, and worth-while to carry through.

Note that you don't have to execute your plan against what you have determined the enemy's to be, if you don't want to. You can execute their plan against your own, giving them the initiative if you prefer. This is generally preferable where the initiative lies with the enemy.

It should be quite evident that to thoroughly visualize our own and the enemy's courses of action, it is not enough, as a general thing, to merely visualize the courses of action, as they are normally too broad. We will probably find that we will have to consider the detailed operations of which each course is comprised. This quotation from S.M.D. states the case very simply indeed. -

Show: B47-159

"It is rarely that courses of action can be compared without resolving each, to some extent, into the detailed operations which it comprises. However, this analysis is confined, as previously explained, to the details whose consideration is necessary for purposes of a sound com-

parison. In some cases there may be need for study in the greatest detail. Generally, however, the requirement can be met by considering for each operation the kind of action, the types of weapons, and the physical objectives.

"During the progress of these analyses of the impact of operations upon each other, there may occur to mind, further operations which an alert and awakened enemy may undertake in opposition; the counter to these operations may also suggest itself.

"The use of the chart, with positions and forces plotted, is here frequently essential; in tactical problems diagrams and tables showing possibilities of position, distance, speed, maneuver, gun ranges, relative strength in types and weapons are useful."

Cut: B47-159

The important point is that we need only go into operations here as necessary, to give ourselves a clear picture of the whole set-up. Sometimes, of course, if it is a complicated problem we are solving, it may be necessary to go into great detail - and again sometimes, we may decide that such detail is not necessary at all. It is solely up to the Commander. In the end, the amount of "breaking down" into operations, is directly dependent upon our ability to visualize.

Show: B43-166
Cut: B43-166

Show: B43-167
Cut: B43-167

It should be quite evident that the comparison of courses of action, as done above, is the equivalent of a new testing for suitability, feasibility, and acceptability. S.M.D. says -

Show: B43-160

"Through the procedure described above, the Commander is afforded further opportunity to test his courses of action, as to suitability, feasibility, and acceptability. He can, once more, view each of his courses from the standpoint of its suitability. The visualized enemy action may introduce considerations, not previously realized, as to whether certain of his own courses are suitable to the appropriate effect desired, when results are envisaged on the basis of the possible opposition. As to feasibility, the analysis permits him to make a further estimate of the enemy capabilities with respect to obstructing or preventing the desired outcome of his (the commander's) courses of action. In addition, by visualizing the pertinent operations involved, he enables himself to evaluate the costs to be expected."

Cut: B43-160

This, however, is not to be interpreted as stating that the procedure just completed was a special testing for these three requirements, or that these courses were to be put through these requirements anew. Under this heading, it merely means that in comparing courses and their component operations, we

automatically go anew into the body of these requirements. For example, we might find in our comparison of operations that something we visualized was entirely unsuitable - or that the enemy's possible movements or use of weapons, etc., might be such as to make a course infeasible, or that the consequences as to cost of some course might not be acceptable. Should this be so, we might decide that it was useless to carry this course along further - in which case, we should reject it. As a result of all of this, we now will have, very probably, only a few of our courses left, and it is from these retained courses that we will determine our best course of action by comparing own courses of action.

SECTION IV

Comparison of Own Courses of Action

Show: B43-161
Cut: B43-161

Show: B43-162
Cut: B43-162

How do you do this? Well, we look them over with the utmost care. We have probably already formed some opinion, but this should not be allowed to cloud our judgment until we have had an opportunity to re-test them for suitability, feasibility, and acceptability. These are called "conclusive tests." As a result of this final testing, it should not be too difficult to choose the best course. As stated in S.M.D., this course may be a complete course in itself, or it may be a combination of partial courses which add up to the accomplishment of the effect desired.

Show: B43-171
Cut: B43-171

Show:B43-172
Cut:B43-172

Show: B43-173

Cut: B43-173

However, and here appears that interesting phenomenon - we may find that none of our courses, or combinations of partial courses are satisfactory. This is what is called a dilemma.

What do now? S.M.D. explains this very clearly. It says that now we must make constructive representations to higher authority and that higher authority will take any action deemed necessary on the premises. But supposing we are away in a distant theater. That then? Well, then we must determine for ourselves a task which is suitable, feasible, and acceptable. This means that we have dropped our basic problem as such, and have adopted a modified problem which will contribute towards our motivating task, or that failing in this, we have adopted a modified problem, the solution of which will contribute towards our purpose.

Should we be unable to do any of these, we will have to depart from our instructions and evolve an entirely new Mission for ourselves.

SECTION V

THE DECISION

Show: B43-174 Show: B43-163

That course of action which we have determined in the preceding section as the best course is, as a usual thing, now set down as the Decision. We may carry it over in the exact words of our best course, or we may re-word it here to so develop it as to insure that its meaning is plain - that is, that it

cannot be misunderstood. Thus it becomes necessary, at this time, to scan the best course of action thoroughly and to change its wording, but not its meaning, if necessary. Very frankly, in my own experience, my selected course has almost invariably been my Decision although it has also been my experience that I have, on occasions, re-worded my Decision to make it clearer for my subordinates when I issued it as paragraph 2, the general plan paragraph, of my directive. The point to be remembered here is that the Decision expresses the General Plan of Action, including the General Objective for attaining the assigned objective and, in proper detail, the action required for its attainment.

It is customary to keep the Decision simple and no amplification is usual unless it is needed. For example, it might be sufficient for us to have a decision "to destroy the convoy" without further amplification, but should we desire to expand the method, we could amplify it by saying "to destroy the convoy by torpedo plane attack." We would do this probably, should we in our comparison of courses of action, develop the fact that this was our principal advantage, and we desired to make note of it now.

The purpose of the Decision is the motivating task and is generally linked to the Decision by the words "in order to", unless the decision will only partially accomplish the motivating

task when the words "in order to assist in" are used. The reason for including the purpose generally with the statement of the Decision is that when developing operations, it is necessary that each operation contribute to the accomplishment of the motivating task as well as to the Decision.

Sometimes it is not desired to include certain deductions or inferences in the Decision, but it is desired to give them emphasis over their fellows. Therefore, it is quite usual,and is probably preferable to include such amplification as a corollary to the decision, in which case, the amplification referred to under the Decision would be stated as corollary, to wit: "To exploit superiority in torpedo planes." This question of corollaries is a little difficult, and the idea back of them may be somewhat clarified when we say that they have been called in recent years "Minor Decisions." As S.M.D. says, they "may involve certain deductions or inferences, either delimiting or amplifying its nature", and, therefore, as they will be of interest to us in formulating our plan later, they are listed so that we may not forget their importance."

It is not wise to have too many corollaries. When that is done, and I have seen it done in students' solutions at the War College, it appears as if all of the operations to be considered in the next step have been thought of in the first step, and so listed. I cannot stress too strongly, the need for limiting

corollaries to those which are important and applicable.

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The above discussion completes the Estimate of the Situation. Let us now summarize what we have learned in today's presentation. We have learned -

First - That there are four steps in the solution of a military problem. These are:

(a) The selection by the commander of a correct objective by achieving which he may attain his assigned objective.

(b) The resolution of the required action into detailed military operations.

(c) The formulation of a directive with the intention of immediately inaugurating planned action.

(d) The supervision of the planned action.

Second - That an excellent approach to the solution of a military problem is through the use of the Fundamental Military Principle which is -

Effective action with relation to correct physical objectives,

Projection of action from advantageous relative positions,

Proper apportionment of fighting strength,

Ensurance of adequate freedom of action,

Each fulfilling the requirements of suitability, feasibility, and acceptability.

Third - That the Estimate of the Situation is developed in five stages which are -

(a) The development of the Mission (the appropriate effect desired) through an analysis of the Situation, a recognition of the Incentive, and the appreciation of the objective.

(b) The Situation and Courses of Action, including Enemy Capabilities and Own Courses of Action.

(c) Analysis of Opposing Courses of Action.

(d) Comparison of Own Course of Action to determine the best course.

(e) The Decision (which is the best course of action re-worded as desired for amplification or clarity).

I trust that this discussion has not been too difficult for you, and that you have managed to retain part of it. Frankly, what we have here discussed for the past two hours, is what you are actually studying for the 11 months of the course. I do hope, however, that I have succeeded in conveying to you some idea of the difficulties of planning and of indicating why it is that officers trained in planning are vital to the success of the national effort.